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Edited by WILLIAM HUNTING, F.R.C.V.S.

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THE INTRODUCTORY LECTURE AT THE R.V.C.

The five veterinary schools that supply candidates for the Diploma of the Royal College of Veterinary Surgeons are now all in session and, we hope, well supplied with students. The only report of the opening proceedings yet obtained is that of the London School, and we desire to draw attention to one or two points in Professor Crookshank's very interesting and suggestive address. One was, the desirability of more attention being given by students before they come to College to foreign languages, especially French and German. This is undoubtedly good advice, but we cannot expect schoolboys to choose their subjects of study. They are taught at school just what the head-masters like, or what they consider necessary for the examinations a lad has to pass. Our matriculation examination is simply a copy of that required by the fossilised medical profession—Euclid is compulsory, whilst French and German are optional. If we consider Euclid as mental athletic exercise how much good does it afford the average boy who has struggled through two books? How many boys, three years after leaving school, retain the slightest impress made by their study of Euclid? Certainly not one in a thousand! and probably not one in a hundred has any notion of why Euclid is taught. The time wasted on this and some other scholastic subjects might with very great advantage be given to foreign languages. The other point we desire to underline was put in the form of a question —"Why should not the Veterinary College be recognised in the New University of London." We would extend the question and ask—Why should not all our veterinary schools become connected with a University so that our graduates could obtain degrees in veterinary science? If such a thing is possible there is no objection to it, and its attainment would give us a scientific and professional mark otherwise unattainable. This we say, of course, provided a Veterinary University degree would not override the Act of 1881 which reserves to the Royal College of Veterinary Surgeons the sole right of licence to practice. It is possible that a University would consider it a slight on their degree that a smaller Body should have the power to prevent its being of any material value until the holder had satisfied that lesser power that he was fit to practice. We are only a small body and our material interests require that we should not be broken up into parties. The Act of 1881 is our salvation, and we must keep that intact even if we sacrifice the benefits connected with a University degree.

THE A.V.D.

On page 205 is a note contributed by a retired Army Veterinary Officer. Some special knowledge is required to understand all the grievances and disabilities of the services. But no special knowledge is necessary to appreciate the gross unfairness pointed out by our correspondent. Pay, pensions, and privileges are all at a lower standard for veterinary than for any other officers of His Majesty's Army.

FOOT CASES.

By C. CUNNINGHAM, M.R.C.V.S., Slateford.

FIBROMA (?) OF THE CORONET.

During the summer and winter of '99-'00 there happened to be at very hard work in this district a big, dark brown, rather long legged, middle-aged cart mare of the hardy "kick and bite, never give in" sort, so useful at times to poor owners; and this mare had a pair of fore feet the like of which I never saw, and the like of which possibly—without presumption—comparatively few practitioners have had the opportunity of seeing. As the result of long standing and imperfectly treated quittor, all over the seat of sidebone on the outer side of each fore foot, beginning pretty far forward and extending round the coronet to the heel on the inner side, filling up the hollow and reaching nearly to the fetlock, was a big, bulging, hard callous enlargement or tumour standing out three to four inches all round, covered with thick horny skin and stubby hair, and having on its surface the small openings of several sinuses leading deeply down to the ossified and diseased cartilage underneath. And yet with all this diseased undergrowth the mare strangely enough walked and trotted sound. Over and among the rough stones of the quarry and along the public road she went regularly with her elephant-like feet—and walking sound no one apparently could interfere. I was told that this mare at one time belonged to a city contractor, that she had been often troubled with suppurating corns and quittor, that many unsuccessful attempts had been made at cure, but getting worse instead of better these tumours had formed, and the mare had gravitated to her present low and hard lot.

In the spring of 1900 matters reached a climax. As the result of frequent bruising etc. the diseased growths had increased to such an unnatural size and were so unsightly that the officers of the S.P.C.A. decreed that this mare in common decency should work no longer. The distressed owner with some watery effusion within his eyelids appealed to me as a last resource. "She was such a useful beast, nothing wrong but her feet, could I do nothing?" The outlook was not promising. To dissect the elephant-like skin from the gristly growth, remove it and the cartilage, and stitch again seemed scarcely practicable; the only way would be to cut and shear off completely. Would the hæmorrhage not be excessive? Would the diseased structure not grow again? Could the healthy skin ever be induced to stretch sufficiently to even partially cover the big, broad, raw surfaces left after removal?

After some simple previous preparation the mare one forenoon (29th May, 1900) was given 1oz. chloral hydrate in solution on an empty stomach, and having improvised a pair of rope hobbles (for one might as well try to encircle her body as her forepastern with an ordinary hobble) she was laid gently down on a good broad bed of clean oat straw, and we were pleased to see fell at once sound asleep. "To make assurance doubly sure" however, a syringeful (80 minims or so) of liq. cocaine hydrochlor. 10 % was injected under the skin at the fetlock of the off fore leg, which was then released from the rope hobble; a good strong rubber tourniquet put on below the knee, and with a big, broad, specially made and sharpened firing iron at a white heat, I made an onslaught on the tumour, but saw at once that the progress was too slow. A surgeon's amputating knife of the smaller size did better, and in a few minutes all the big fibrous mass which I could safely remove was cut and sliced off, and the coronet and pastern reduced as nearly as possible to its natural dimentions. The diseased cartilage or sidebone gave some trouble—a considerable portion having to be cut and scraped, and the sinus in it gouged out—but its complete removal did not appear called for. There was little, if any, hæmorrhage, the tourniquet preventing, but on being relaxed for a moment the whole broad surface became deluged with blood, three or four small arteries spurting and veins flowing in all directions, to use a bystander's word it was like "turning on the tap," so much so that I was glad to refix the clasp and with the firing iron seal up the vessels, searing gently all over the surface. A good dusting with antiseptic powder, a thick pad of carbolised wool, and two long calico bandages wound tightly round completing the work. The other, the near leg, was then dealt with in the same way, my youngster trying his hand with the knife and completing the process considerably sooner. After removal of the hobbles the mare slept on for half an hour in the sunshine and on her nice bed, got up, shook herself, and walked into her box and started on her soft feed apparently unconcerned, and the bandages, though reddened, held good—there was not a drop of blood on the ground. The mass removed weighed a little over 9½ lbs., say 5 lbs. from the off foot and 4½ lbs. from the near. Its structure fibrous, condensed, cellular, and fibrous tissue, but almost as firm and hard as cartilage. No appearance of malignancy.

The after treatment consisted simply of fresh dry dressings every third or fourth day, first bathing the feet in a shallow tubful of warm water to which some Jeyes' fluid had been added, thoroughly cleansing and drying, then a good dusting with some slightly caustic and astringent powder (generally cupri. sulph. zinc sulph. and calamine, equal parts) and then dry wool and tow and tight bandages all round. The wounds from the first showed a disposition to heal, the slight film or slough produced by each dressing gradually brought the raw surface under the level of the surrounding skin, causing the latter to slowly stretch or spread over till at the end of eight or ten weeks a fairly presentable appearance existed. The greater part of what had been raw surface was covered with healthy skin, and the remainder had become mostly dry and horny. I may state that the mare was sent home about ten days after operation, and in little more than another ten days, to my surprise and disgust, I found her on the turnpike road with a big 30 cwt. load of stones and a 10 cwt. cart behind her, and her worthy owner walking alongside very well pleased with himself. "The mare was sound, the bandages very nice, no one would interfere,"—and singularly enough the man was right—no one did interfere. Long before the wounds were healed, in spite of my remonstrance, the mare was kept at daily hard work, but walking sound the officers of the R.S.P.C.A. saw no cause for interference. A little raw sore under the saddle or collar measured sometimes by these men with an elastic tape becomes "great cruelty." A big sore on each fore feet, 8 by 4 inches, covered with a bandage is "no cruelty" in the eyes of the R.S.P.C.A. provided the animal is going sound. Rather strange logic, and almost worth knowing. This mare has now been fourteen months at work since the growths were removed, is going and working still, and with more care and consideration on the owner's part might be useful for some years to come.

This case (I.) confirms the old adage "that some very bad, almost hopeless looking cases, if straightly attacked, turn out much better than expected."

(II.) Shows that there is really comparatively little sensibility though plenty of vascularity in these fibrous growths from heel and coronet, and that their removal is easy and attended with little if any pain under chloral, chloroform, cocaine, or any good anæsthetic.

What caused the excessive and superabundant formation of adventitious tissue in this case is rather, to me, difficult of solution. In how many cases of "quittor of long standing and imperfect treatment" is there none, or scarcely any, of such abnormal growths?

(III.) The case shows rather an extra good result from chloral hydrate internally, along with cocaine locally, in producing anæsthesia with a modicum of trouble and a minimum of disagreeable effect. Nothing could be simpler than the little drench of the chloral, and the little syringefuls of cocaine to the fetlocks, the mare simply seemed to fall drowsy at once, was easily cast, showed not the slightest sign of pain during all the cutting with the knife etc., and it was pleasant to see her lying so nicely after we had finished, and in her own time get up, and apparently be as if nothing unusual had been going on. Possibly by itself either of the agents might have sufficed, but combined I think is better. I have seen chloroform give almost as good a result, but with more trouble and not so pleasant recovery.

(IV.) The case shows, too, the use and benefit of the rope hobble in such thickened pasterns. No one need want a set of hobbles. A few pieces of ¼ or ½in. rope and four or five little iron rings suffice. The D of the old hobbles answers very well as a ring, and with it the hobble chain may be used. For foals, ponies, and cattle, too, they are very useful.

(V.) The benefit, not to be dispensed with, of a good tourniquet in foot operations, so long as applied, the parts being practically bloodless.

A fibrous tumour of average weight 5lbs. growing

from the diseased external lateral cartilage of each forefoot and involving and blending with the surrounding tissues, is a rarity with me, though I am aware that much larger and heavier growths have been removed from the fetlocks and heels. Thus in Cadiot's work there are details of fibrous growths of somewhat similar character from the hind pasterns and fetlock of a Clydesdale stallion, the weight of the mass removed being, if I remember aright, 33lbs. The photos and notes of the case are interesting, as also, to pass to another subject, are this writer's and Müller's contributions on

PICKED-UP NAILS; PUNCTURED TENDON; AND OPEN NAVICULAR BURSA.

Mention of this injury to the foot is apt to bring up before the mind's eye of the elderly practitioner an array of rather grave and even gruesome cases; some remarkable recoveries, and not a few deaths. Cases—1st., in which the synovia in no stinted flow has found its way for days through the little aperture at the side of the frog, but keeping fairly clear in colour and healthy in quality has gradually ceased—ending in complete recovery. 2nd, Cases in which in a few days the joint secretion has become tinged with blood and rusty-coloured pus; and recovery, if it does take place, is probably by adhesions between bone and tendon, and accompanied possibly by laminitis and descent of the sole of the neighbouring foot. And 3rd, cases of extremely acute and rapid course, in which inflammation and suppurative action extends to both bursa and coffin joint, an abscess forming on the larger articulation and finding exit through the softened and degenerated extensor tendon at the front of the coronet and pastern, or by a side issue—death of the patient ensuing or slaughter being humanely called for.

Everyone can recall to mind cases of the first and second class. As a specimen of the first, I remember a young farm mare with slightly flat feet, which a blacksmith (with that keen love of veterinary surgery which our "Veterinary Lecturers and Editors are so good at fostering and encouraging) attended for a week for "corns," and only when the detached commissure with the little hole through it was shewn to him did the true state of the case dawn on his intelligence. The synovia did not come at first in this case, but when it did come *it came*. From a little moorland farm in the depth of winter the mare was floated here, and as she hopped on three legs into her box, a professional *confrère* who happened to be present picked up the fore foot, and when he saw the joint oil trickling over the sole and the nice little yellow clotted mass at the side of the frog, he kindly at once emphatically volunteered the statement, "You will make nothing of that case." Yet with care and very simple treatment that big, good mare, ten weeks or so after, was sent home with her tail tied up, dancing and playing—well worth at least the "half hundred," and did her work well with no relapse for at least seven years afterward.

As a specimen of the second, a half-bred gelding, young also, stood on his off hind leg and foot for nearly three weeks, scarcely allowing the near to touch the ground; rusty-coloured oil and pus, when allowed, flowing freely from the side of the frog. Then the change which one does not like, standing equally on both feet, and yet that horse was ultimately useful for years, but with an obliterated navicular bursa on the near foot and a pumiced sole in the off.

Specimens of the third and worst cases are fortunately not so frequently met with now-a-days as formerly. The horse picks up a nail, gets excessively lame and feverish; synovia may or may not be exuding from the side of the frog, but the coronet and heels soon begin to swell, the fever and pain and suffering increase. Soon fluctuation is felt at some part—in the hollow of the heel, or side of the pastern, or more frequently right in front a little above the insertion of the extensor pedis tendon—followed by bursting of the abscess and free communication with the coffin joint. Searching for the cause of this acute and fatal course in two or three cases, I think I traced it to the fact that the puncture had been low down and well forward, and had entered very deeply, passing through the tendon immediately behind its insertion into the os pedis, grazing the inferior border of the os naviculare, and even gaining entry through the inferior navicular ligament into the articulation between that bone and the os pedis, exciting acute arthritis there which had rapidly extended to the true coffin joint above. It is surprising how deeply a slender sharp foreign body will at times force its way.

In the way of treatment—entire rest so far as that is practicable, and treating the puncture as a common wound, with moderate restraint on the synovial flow, has given the best results with me. In slings constantly with or without the padded beam or seat behind, or slings for a few hours and rest down (if the animal inclines) alternately; keeping sole and frog as thin as a wafer; with pads of antiseptic and astringent dressing—wet or dry, as may be deemed best—kept applied by bandages, appears to answer as well as and better than heroic measures.

Our continental friends, however, according to Mr. Dollar's very excellent and valued translations have another "arrow in their quiver," viz., "Resection of the flexor pedis tendon." "After very thoroughly thinning the sole, frog, and especially the bars, the horse is cast, the sensitive frog exposed . . . . An incision is then carried through the whole thickness of each lateral furrow of the frog, the two meeting at the point of the frog . . . the fleshy, and a portion of the fibro-fatty frog are held back by means of a tape passed through the point of the frog . . . The operator first divides and reflects the tendon at the point of its insertion into the os pedis. . . . . The tendon is then cut through at the upper border of the navicular bone by means of a knife shaped like a laurel leaf, the section being as smooth as possible; . . . The stump of the tendon removed, the navicular bone scraped . . . and a granulating surface produced by removing the cartilage. The cavity is then sponged . . and rinsed . . . and several masses of tow moistened with carbolic or sublimate pressed firmly into the cavity, the frog is returned to its proper position and a moist dressing applied over all," and with proper after treatment

some "horses are back at work in four to six weeks."

Has not this operation been very much overlooked in this country? Vouched by such eminent authorities, of its success and efficacy in certain instances at least, there can be no manner of doubt, though to the uninitiated a few unbelieving questions very naturally arise. When the tendon is divided at its point of insertion and "its stump removed" to what does the "smooth cut surface of the tendon" become ultimately firmly reattached?—to the granulating surface of the navicular bone, or what? We all know the dire result which follows when the flexor tendon is torn from its pedal attachment in cases of osteo-porosis, or is ruptured after neurotomy, and one would naturally fear a like result after this "resection." Apparently, however, such is not the case, and the operation surely deserves more general attention as a curative measure which may succeed when others fail. Thus a good many years ago it fell to our lot to have quite a little epizootic—if I may so speak—of such cases, thirteen really severe cases—tendon and bursa involved in each of them within a couple of years. Of these there were six recoveries, and seven failures. Two or three of these latter would have made excellent subjects for "resection"—possibly with successful results. The remainder belonged to the acute fatal type referred to, and for them so far as I could judge there was no hope.

VOMITION IN A HORSE.

By Arnold Spicer, M.R.C.V.S.

The act of vomition in the horse was once so specially connected with rupture of the stomach that all of us do not yet recognise it as due to over-distension. If the chief obstruction to return of food through the œsophagus is the folds of loose mucous membrane at the cardiac end of the stomach it is obvious that over-distension of the organ will remove the folds almost as effectually as rupture.

A short account of a recent case may not be uninteresting. About 11 o'clock one morning I was sent for to see a grey gelding suffering from colic. The day previous it had been allowed to eat a large quantity of maize and middlings. Previous to that it had beeen fed on grass only. It was found in pain in the morning and treated by being walked about and by the administration of a draught containing opium. The pulse was 60, the temperature 101° and respiration rapid. The skin was dry but the facial expression was very indicative of pain. Whilst watching it I noticed well marked vomition and was told that this had commenced about an hour before my arrival. The attacks of vomition were repeated at intervals of eight or ten minutes whilst I was there and were attended with very little effort. The nose was was not drawn into the chest, there was little muscular effort. The contents of the stomach were ejected entirely through the nostrils, and consisted of a yellow fluid with semi-digested food smelling strongly of fermented maize. Each act of vomition was attended by relief of distention and pain. The treatment adopted was the administration of aloes and strychnine and by 4 o'clock all pain had ceased. A couple of days later the bowels had resumed their normal action and the horse is now at work apparently none the worse of his dangerous attack.

FRACTURE OF FIRST RIB WITH RADIAL PARALYSIS.

By H. G. Simpson, M.R.C.V.S., Windsor.

Subject.—A five-year-old Army troop horse, the property of one of the Household Cavalry regiments, had no history of any previous injury and had been sound up to the day of the accident.

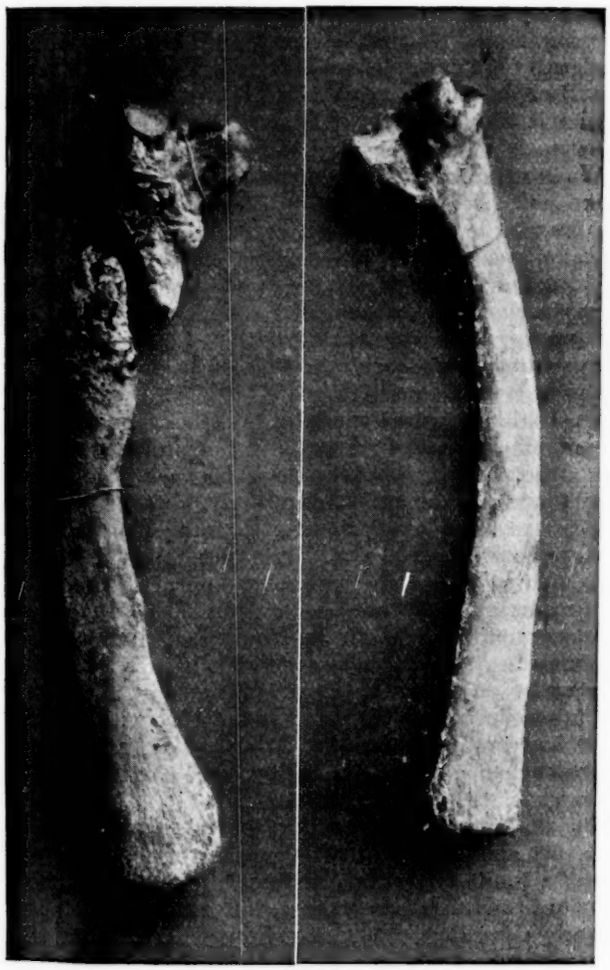
My attention was called to the animal on the afternoon of August the 8th, he had been to the field in the morning and whilst galloping put his foot into a rut, *fell on to the off knee*, and then suddenly recovered himself (he did not fall right down); the man dismounted and finding the horse dead lame proceeded to lead him back to barracks a distance of just over a mile, which occupied 1½ hours.

When I saw the horse he was feeding, but held the limb slightly forward with the knee and fetlock flexed (*there was no descent of the ulna at that time*). On examination the animal evinced no pain except slightly on pressure over the biceps and pectoral muscles; he could bear weight on the limb when it was placed in position, but when moved he dragged the whole leg. I examined him carefully for fracture but could discover nothing. I could hardly account for this paralytic condition of the limb at the time and diagnosed it as an injury to the muscles of the shoulder with possibly nervous paralysis due either to the pressure of inflammatory exudate on the nerve or to actual injury of it when the horse fell (he probably having fallen with his leg "straddled" away from the body.) I had the animal put in slings and ordered hot fomentations and sedative applications to the shoulder.

Next day on going into the box I found there was well marked radial paralysis—the point of the ulna having descended quite three inches. This, coupled with the symptoms of the previous day I considered warranted me diagnosing this as a case of fractured first rib. I endeavoured to bring pressure to bear over the region but could make no impression of pain on the animal, neither did he evince any on the limb being moved or on being moved himself.

I decided to try treatment, although dubious as to the result. I kept the animal in slings, had compress bandages applied all up the limb to keep it as much as possible in its normal position, and applied a severe blister to the shoulder and elbow joint, the animal evinced sensation at this and endeavoured to paw the ground for 24 hours afterwards. At the end of a fortnight I applied another blister but it had no effect, and the animal was kept on till Sept. 12th when he was destroyed, and a post-mortem held. He never evinced much sensation in the limb except below the knee, and the ulna remained in the same position all through, the horse was in no pain and fed well, there was marked wasting of the triceps muscle after the first week, but no appreciable wasting of the flexor muscles.

Post-mortem.—The post-mortem examination was most satisfactory and showed a complete fracture of the first rib on the near side, about an inch below the head and inclined in a longitudinal direction ; no real union had taken place although there were osteal deposits around the locality of the fractured ends of bone.



I find on looking up *The Veterinary Record* there are several cases of fractured first rib with radial paralysis recorded. In June, 1900, Mr. Goldsmith reports a case, and in April 30th, 1898, Mr. A. Peele, also in Feb. 1898, Mr. Hunting gives a *resumé* of three cases. The first two contributors do not give very minute details, but Mr. Hunting explains his cases very fully and in each of his cases the animals only partially fell and then recovered themselves as in the above case. The symptoms during life are practically similar, and in Mr. Goldsmith's case the injury seems to have been caused by a fall against a manger, whereas there is no history in the other cases of the animal having come violently in contact with anything. In no case is a theory advanced as to the direct cause of the fracture ; presuming that the animal has not come into contact with anything I take it that the fracture is due to muscular contraction.

Mr. Hunting states a case in which fractured first rib occurred without "dropped elbow." In the case I quote "dropped elbow" did not appear till next day. I presume from this that although the rib may have been fractured at the time of the accident the nervous structures were not interfered with till next day to any great extent, and therefore that radial paralysis is not diagnostic of fractured first rib till there is pressure on the brachial plexus, and that an animal may be suffering from a fractured rib and yet show no "dropped elbow" for the reasons that the nervous structures have not been interfered with.

I enclose two photographs of the case, unfortunately that showing the position of the limbs has been damaged in developing.

THE DISABILITIES OF THE ARMY VETERINARY OFFICER

Articles 298, 299, and 373 of the Royal Warrant for pay and promotion run as follows :—

298.—A regimental officer may draw full pay for a period not exceeding one year during sick leave granted on the recommendation of the regulated medical authority provided there is reasonable probability that he will be fit to return to duty at the expiration of his leave.

299.—In very special cases such as loss of health from tropical service, active operations or wounds, full pay may be issued for a period or periods of sick leave in excess of that laid down in Article 298, provided that the officers' sick leave shall not in all exceed eighteen months.

373.—An officer of our Royal Army Medical Corps may be allowed full pay during sick leave of absence on the same conditions as those laid down for regimental officers by articles 298 and 299."

So much as applies to combative and medical officers who enjoy Army rank, Article 461 of the Royal Warrant deals with the veterinary officer.

461.—A departmental officer may on the recommendation of the regulated medical authority be allowed full pay during sick leave of absence for a period not exceeding six months. In special cases our Secretary of State may on the recommendation of the head of the Department sanction the issue of full pay during sick leave for a further period or

periods provided that the total sick leave does not exceed one year."

Surely this is ear-marking the veterinary officer with a vengeance. I believe that the matter was represented and redress refused. (1) On the grounds that the medical officer's occupation was more unhealthy. (2) That the rate of casualties in the A.V.D. were not so high as the medical staff.

Neither of these arguments will bear criticism. There is no difference made by insurance companies in life policies of military, medical, and veterinary officers, and out of 46 A.V.D. officers that have been in South Africa 14 have been invalided, or over 30 per cent. Surely this is a butcher's bill large enough to satisfy the most blood-thirsty War Office clerk.

The arguments advanced are childish, and the real reason military medical officers were placed on an equality with combatant was the strong and persistent agitation kept up by the medical profession and the open boycott of the Army proclaimed at many of the schools and universities, which drove the then Secretary of State for War into a corner, and wrung this concession given grudgingly from him in 1880.

Until the leaders of the veterinary profession follow the example of the medical their military brethren, whose tongues are tied, will continue to labour under slights and disabilities, and such will in their turn be reflected on the Body Corporate.

As a result of the persistent agitation kept up by the medical profession I will merely quote one answer given by the then Commander-in-Chief before Lord Camperdown's Committee in July, 1889, as regards military medical officers. Question 2440—"*I object to their taking any military title.*" All the same the combined action of the medical profession was too great, and in 1898 the Royal Army Medical Corps, with full military status and privileges, was formed. I leave the moral to the consideration of the Council of the R.C.V.S. whom we have elected as the guardians of our interests. They have the power to protect them if they have will and ability.

A.V.D. Retired.

ABSTRACTS FROM FOREIGN JOURNALS.

Canine Pasteurellosis (Distemper). — By M. Lignieres, formerly assistant in Prof. Nocard's laboratory, Alfort, now Director of the Bacteriological Institute, Buenos-Ayres, Argentina.

Distemper, also known under the names of "disease of youth," typhoid fever, canine plague, canine catarrh, kennel typhus and contagious pneumonia, canine variola, maladie, morve [glanders], [maladie des chiens] (France), hundestaupe (Germany), cimurro (Italy), moquillo (Argentine Republic), has been likened to the typhoid fever of man, a gastro-enteritis, variola, scarlatina, la grippe [influenza] measles, strangles [gourme] and catarrhal inflammation of the air-passages.

It seems that in spite of the numerous and important researches, nobody had surmised its true nature. However, even before attempting my work on this complaint, M. Even confided to me his suspicions of the possible relations between *lombriz* and distemper.

For a very long period many microbiological researches have been made to clear up the etiology of distemper. In 1875 Semmer made a study of it and succeeded in isolating a micrococcus and a short bacillus. Following him Friedberger, Krajewski, Laosson, Rabe, Mathis, Marcone, and Meloni, Legrain and Jacquot, Schantyr, Galli-Valerio, Babes and Barzanescs, Dessy, V. Casal have found micrococci and bacilli in the pustules, organs or blood of the sick.

We now come to why these different authorities found microbes so varied and, to my mind, by no means specific. I think it is useless to describe these microbes which are so essentially different to that which I am considering to-day as the true specific micro-organism of distemper. The chief object of this work is the elucidation of the etiology of distemper and to demonstrate that it belongs to the group of Pasteurelloses.

In 1896, during the course of my studies on equine Pasteurellosis (typhoid affections [or influenza]), I was struck by the great analogy between this complaint and distemper. Accordingly, starting about this period, I made several tries to unravel the pathogensis of this latter disease. For a long time I vainly endeavoured to isolate a specific microbe from the blood, viscera, discharges and pustules. I found various microbes, sometimes in a state of purity, responding to the characters of the different micro-organisms as described by the various authorities. All my attempts to transmit the disease with these microbes completely failed so I did not by any means consider them as specific and therefore continued my researches.

Shortly after I was more fortunate. In the blood of a very young dog dead of an attack of acute pneumonia I found an entirely distinct microbe under the form of a bacillus which was generally short and did not stain by Gram's method, and exhibited all the characters of the Pasteurella. From the lung I obtained a very different organism. I studied the microbe from the blood and learnt to recognise its qualities, and later on I succeeded many times in isolating it. Unfortunately, at this time, my work on typhoid fever (influenza) and my professional duties left me very little time to follow these researches. Nevertheless, thanks to my *confrère* and friend Métivet, I again had the opportunity to find the same microbe in an epizooty that raged in the form of a septicæmia, in the kennel of one of his clients. Finally, sent by Professor Trasbot to visit a kennel where the animals were dying in a great number, I found myself in the presence of an epidemic having all the grave symptomatic *cortège* of a peracute gastro-enteritis, accompanied with jaundice in several of the dogs. Again this time, from the blood of the latter, I was able to isolate the same organism. I got as far as this when I was sent on a mission to Buenos-Ayres where I found an admirable field for the study of distemper. In the Argentine, indeed, true dog fanciers are very numerous and I had the greatest facility, even

for experimental purposes in obtaining pure bred dogs. I was able to experiment chiefly upon pugs, Danish dogs and fox-terriers. I believe that this circumstance largely contributed to the success of my labours, common bred dogs being always much more resistant than pure bred animals. M. Even has again greatly assisted me by sending me every interesting case at his disposal and I take this opportunity of returning him my sincerest thanks.

Morphological and Biological characters of the Specific Micro-organism—When the microbe is isolated from the organism of the dog it is found occasionally in the form of a very long bacillus and not resembling the Pasteurella very much; but after its first passage through the guinea-pig it commences to change and soon takes on the cocco-bacillary appearance, and as in all the other Pasteurella, it is stained by the various aniline dyes but does not take Gram; it may show involution forms and is non-motile.

Cultures.—It is easily cultivated at 37° C. but grows at 18° or 20° C.; in certain cases it even develops better at this temperature than at 37° C.

Bouillons.—The neutral or slightly alkaline peptone bouillon is preferable to the simple bouillon. If the medium is acid, there is little or no development. The culture has not the usual aspect of the Pasteurella. In effect, the micro-organism, in 24 hours, forms small clumps which very soon fall to the bottom of the tube and the liquid does not lose its limpidity. This aspect of the culture is very characterictic; it disappears, however, in the long run. Thus, in one case, the culture in clumps which lasted until its 20th passage through the guinea-pig ended in presenting an uniform turbidity like that seen in the avian, ovine, bovine, and equine Pasteurella. The addition of a small quantity of serum increases the richness of the culture which still remains in clumps. Glycerine has not any appreciable action.

Hay Tea.—The culture is almost *nil.*

Urine.—The culture extremely poor, and the reaction of the medium is not changed.

Milk.—It is never coagulated and its reaction is normal.

Pancreatic Bouillon.—Cultures very abundant; there is no production of indol.

Odour.—In peptone bouillon notably, the cultures give off a special odour identical to that of the other Pasteurella which is by no means fœtid.

Gelatine.—Plate cultures, after 26 to 40 hours, produce small circumscribed or punctiform colonies, having no tendency to unite, at first transparent then becoming opaque or whitish after eight or ten days. In stab-cultures, the whole length of the inoculation track gives rise to small whitish colonies or a trail having an uniform tint; on the surface the colony, which was at first transparent becomes more opaque; it is circumscribed and its borders keep far away from the wall of the tube. Streak cultures take place very slowly in the form at first of an iridescent whitish and afterwards opaque trail; its borders never come in contact with the wall of the tube. It does not liquefy gelatine. When the culture is a few days old, it is extremely difficult to remove the colonies in consequence of their adhesion to the substratum. This character, which we also find in cultures on gelose, is common to the Pasteurella.

Gelose.—The development of cultures on gelose is quicker and more abundant than on gelatine. The first cultures grow in the form of very small colonies resembling very much those of the streptococci; they are at first transparent and bluish, but slightly withered on the surface. After several transmissions they become larger and have a glistening appearance. In the end the culture becomes opaque and whitish. The stab-culture develops along the line of inoculation. On the surface, a flat colony, which is at first transparent and then opaque and whose borders never come in contact with the wall of the tube, is observed.

Coagulated Serum.—As for the other Pasteurella, coagulated serum constitutes an excellent culture medium. The layer is thin, transparent and does not become thick, but the growth occasionally, as in the case of gelose when inseminated in a similar manner, remains sterile.

Potato.—No culture visible to the naked eye.

Gelose of Würtz.—It is never altered.

Culture in Vacuo.—In peptone bouillon the culture is slight or *nil.* In serum bouillon its growth is poor and very soon arrested as in the case of that of fowl-cholera.

Inoculations.—Generally the micro-organism when recently isolated from the organism of the dog affected with the natural malady, is shown to be comparatively slight in its virulence for all the animal species, save the dog and cat.

Mouse.—White mice when inoculated under the skin with four to eight drops of the culture in peptone bouillon are often resistent.

(To be continued.)

Acute Glanders in Man.—By J. Koch.

The unfortunate victim of this dreadful disease was a district veterinary surgeon, aged 45 years. Pulmonary glanders was the first manifested. Marked fever, pleurisy of the left side then pleuritic abscess treated by Dr. Rotter were present.

Two days after this the body was covered with about 500 pustules and ulcerations. At the same erysipelas of the nose with nasal mucous secretion supervened. Temperature did not exceed 39° C. The patient died on the 14th day.

Diagnosis was confirmed by inoculating a horse and by bacteriological examination.

On post-mortem examination glander nodules, some of which were as large as an apple, were found. Hæmorrhagic nodules were encountered in the spleen.

The bacilli obtained from the blood, pleuritic fluid, pulmonary nodules, spleen, and almost all the ulcerations of the skin gave cultures. Intra-peritoneal inoculation of the guinea-pig caused the specific orchitis.

Koch considers the continuous elevated temperature as a constant symptom. Shivering is often wanting. The second important symptom is the pustules and ulcerations of the skin. Generalisation of *the infection* is very prompt.

Nasal glanders is only observed in half those affected. In the majority of cases disease of the

articulation with effusion, inflammatory swellings and peri-articular inflammation is found.

Differential diagnosis of this from articular rheumatism, typhus, influenza, and septic infection is to be reckoned with.—(*Deutsche Méd. Wochenschrift, No. 9, 1901*, ex. *Bulletin Vétérinaire.*)

H. G.

ROYAL VETERINARY COLLEGE.

The Session opened on Wednesday, Sept. 25th, when the chair was taken by Mr. Albert Brassey, M.P., and the introductory address was delivered by Prof. Crookshank, one of the Governors.

The CHAIRMAN, in opening the proceedings, said: Mr. Principal and Gentlemen,—I have the pleasant duty of occupying the post of Chairman on this occasion, and I am pleased that it is not a very arduous duty that I have to perform. I am very glad to see so many students round us, and I only wish there were more. I am told that the numbers are not so great as they have been in former years. At the same time we must all admit that the necessity for veterinary science and skill does not by any means fall off. (Hear, hear.) I therefore hope that this year and in future years we shall try to keep up our numbers and to increase them. It is the custom, as you know, on these occasions to have an introductory address, and Mr. Crookshank has come to town at great trouble to himself from the North of Scotland. I will now ask him to kindly address you. (Cheers.)

ADDRESS BY PROFESSOR CROOKSHANK.

I esteem it a great honour to have been invited to deliver the introductory address, and it is a sincere pleasure to me as a Governor of this College to welcome to-day both new and old students. It is very gratifying to all those who have the interests of this College at heart, that the number of students for several years has been so well maintained. I congratulate the new students upon the choice they have made in selecting the veterinary profession as their career in life. I congratulate them also upon the advantages which they will derive as students of this Institution.

The Royal Veterinary College not only stands in the front rank of veterinary schools in the British Empire, but it compares very favourably with those great institutions in France and Germany which have a world-wide and long established reputation.

In this country great difficulties have to be encountered by those who desire to promote scientific education. There is not the same amount of sympathy and financial support which is given to scientific institutions in America and on the Continent. And therefore I feel very strongly that those who are responsible for the management of this College may, considering their limited resources, claim great credit for making the teaching so efficient, and for placing opportunities for original research within the reach of both the teaching staff and the students.

With very many parents it is a most difficult matter to choose a career for their sons, and therefore it ought to be more widely known that it is a great advantage for young men to pass through a course of training in a veterinary College. Much might be said with regard to the danger of overcrowding the profession, but I venture to think that there is still plenty of room. The ranks of those engaged in private practice have to be filled up. There is a great demand in the Army for thoroughly trained veterinary surgeons. Many members of the profession have rendered splendid services in the great war in South Africa, and if the experience of this war leads to the employment of mounted troops in still greater numbers, if in other words horses are destined in future wars to play such a conspicuous part, there must necessarily be a still greater demand for the services of those who have to select and take charge of them. There is also an increasing demand for veterinary surgeons in the Colonies. In South Africa and our other possessions the best methods of stamping out animal plagues must occupy the attention of the Colonial Governments, and thus give employment to veterinary surgeons.

There must also arise a greater demand at home for their services. The eradication or diminution of such diseases as bovine tuberculosis could only be attempted by the intelligent co-operation of the public with veterinary officers of health.

There are many parents who send their sons to the Universities without having definitely settled upon their future career, and many parents who could not aspire to sending their sons to a University would do well to secure the advantages of a scientific education by sending them to a veterinary College. They would receive a sound scientific training, and the fees for the whole curriculum exclusive of the cost of living, were less than the fees for sending a boy for one year as a boarder to one of the best preparatory schools. If the student did not eventually practice as a veterinary surgeon, the time spent in acquiring veterinary knowledge would be by no means lost. Every well educated man should have some acquaintance with the subjects which are taught at a veterinary College, such as botany, biology, physiology, chemistry, and even anatomy. Anatomy is of special value in training the intellect. It is an exact science, and the mind of the student is not disturbed by new theories and a variety of opinions. It encourages accuracy in observation, it necessitates an accurate memory, and it trains the hands in delicate operations. As the student passes on to the essentially professional subjects, I mean the recognition, cure, and prevention of the diseases of animals, especially of horses and cattle, it will at once be admitted that there are many occupations in which a knowledge of these subjects can be put to practical account. A student may not ultimately elect to practice, he may prefer to take up farming either at home or in the Colonies. He may become an estate agent, or be called upon to lead the life of a country gentleman, and perhaps serve on the "Diseases of Animals Committee" of a County Council, or other

local governing body. In any of these positions the information he would have received would prove to be of very great advantage.

Preliminary Education.

In the education of students before they come to the College, it is very desirable that more attention should be given to foreign languages, especially French and German. Foreign veterinary surgeons have a great deal to learn from our methods, and English veterinary surgeons are equally indebted to the work and experience of their foreign colleagues. Some of the best text books were written by foreign authors, and if the scientific veterinary surgeon in England wishes to keep in touch with continental opinion, experience, and research work, it is an enormous advantage to be able to read the original publications. To depend upon the chance of translation, or upon meagre abstracts in English is very unsatisfactory, and many contributions to literature would be quite out of reach. Those who held office as advisers to County Councils or aspired to appointments in the Veterinary Department of the Board of Agriculture, would appreciate the value of being able to study the Reports of the Agricultural Departments of other nations.

The admirable Reports of our own Board of Agriculture would at a glance illustrate this point. This is, however, not the only value of a knowledge of French and German. International Veterinary and Science congresses are becoming more and more popular. The opportunities for exchanging opinions and experience with other nations are increasing, and the hard-worked veterinary surgeon might combine with the enjoyment of travelling, the opportunity for exchanging ideas with his professional brethren by attending these congresses in foreign countries.

I do not require to be told that the veterinary surgeon has to think first of making a living, I am quite aware of that fact, but it must be remembered that travelling on the Continent is a very different matter from what it was twenty years ago. The expenses have been reduced to such an extent by co-operation that an opportunity for foreign travel is placed almost within the reach of all. I would not even leave out the students, I should like to see parents encouraging the idea of "Students Co-operative Tours" thus enabling them to combine a little sight-seeing and the enjoyment of travelling with a visit to the Museums and Laboratories and school buildings of such Institutions as the great Veterinary School of Alfort, near Paris, the Veterinary School at Berlin; and the Pasteur Institute in Paris, and the Hygienic Institute at Berlin, where diseases common to man and to lower animals are constantly the subjects of investigation. Travelling scholarships would be of quite as much advantage to veterinary as to medical students.

Higher Education.

I do not propose to discuss the question of the higher education of veterinary students, but I trust I may be forgiven if I again allude to a subject which I referred to on a similar occasion many years ago—I mean the desirablity of conferring a degree in Veterinary Science. I desire to draw the attention of the leaders of your profession to this question—Why should not the Veterinary College be recognised in the New University of London? I should also again point out what a great advantage it would be both to veterinary surgeons and to the public if the Royal College of Veterinary Surgeons could see their way to instituting a special examination and conferring a Diploma of Preventive Veterinary Medicine. The course of training should be somewhat similar to the course of instruction given to medical men for the Diploma of Public Health. I hope to see the day when every county council and every rural and urban council will appoint a Veterinary Officer of Health, and every applicant for such a post required to hold the Diploma of Preventive Veterinary Medicine.

I hope that in the future more veterinary surgeons will be placed in a position which will enable them to devote their lives to original research. There is an enormous field for investigation in the causation and prevention of diseases of animals.

Tuberculosis.

It would be impossible to give a better illustration of this fact than by referring to tuberculosis in animals, especially cattle. At the recent International Congress in London the relation of bovine tuberculosis to human tuberculosis was prominently brought forward in a paper read by Dr. Koch, and the question is of so much importance that the Government has appointed another Royal Commission to enquire into it. The Governors, the Staff, and the students of this College are all, I am sure, very proud of the fact that the researches made by your distinguished Principal and the great reputation which he has made by his knowledge of comparative pathology have led to his selection as a member of this most important Commission.

It is instructive and encouraging to the veterinary profession to know that the researches which created most interest at the Congress were those undertaken in different Veterinary Colleges. Dr. Koch's experiments were carried out during the past two years with the co-operation of Professor Schutz in the Veterinary College at Berlin. It is necessary to refer to these researches in some detail to explain the points at issue and to compare the work and conclusions of Dr. Koch with the experiments and opinions of others who have investigated this subject. Dr. Koch in various ways inoculated nineteen cattle with human tubercular virus and none of them showed any symptoms of disease. On the other hand cattle inoculated with bovine tuberculosis suffered, without exception, the severest tubercular disorders of the internal organs. Dr. Koch concluded that human tuberculosis differed from bovine, and could not be transmitted to cattle, and he further announced that whether man was susceptible to bovine tuberculosis at all was not yet absolutely decided, and that if such susceptibility really existed the infection of human beings was

but a very rare occurrence. Dr. Koch believed that the extent of the infection by the milk and meat of tuberculous cattle and the butter made of their milk was hardly greater than that of hereditary transmission, and therefore he did not deem it advisable to take any measures against it. I must express myself in full agreement with Professor Koch that if infection occurs at all, it is of very rare occurrence. But I entirely disagree with the statement that human tuberculosis cannot be inoculated in cattle, and I must add that I consider Dr. Koch's statement with regard to preventive measures as singularly unfortunate. It conveys the impression, as pointed out by Dr. Hueppe, that Dr. Koch would have us concede to dairymen, and milksellers the right of selling tuberculous milk. I feel justified in disagreeing with Dr. Koch on these points because in the course of an enquiry on "Tuberculosis in relation to the Public Milk Supply" which was published in the Report of the Board of Agriculture for 1888 I made the following experiment :—A perfectly healthy calf was inoculated intra-peritoneally with very virulent human tuberculous sputum and the result was extensive tuberculous deposit at the point of inoculation with hundreds of tuberculous new growths extending from it. The calf died of blood poisoning 42 days after inoculation and sufficient time had elapsed for the most pronounced infection of the peritoneal cavity. On microscop cal examination extremely minute tubercles were found disseminated throughout the lungs and liver. Long and beaded bacilli of the human type were found in these organs and in the peritoneal deposits. This experiment was also made in a Veterinary College. It was made in the Institution in which we meet to-day, thanks to the great interest taken in the investigation by your former Principal, Sir George Brown. There was no need for me to repeat this experiment as it was absolutely conclusive, and it does not require any Royal Commission to verify the result. Other investigators in England and America have already confirmed this experiment. Dr. Sidney Martin in experiments on behalf of the Royal Commission on Tuberculosis succeeded in infecting cattle with human tuberculous virus.

In experiment I., four calves received with their food sputum from two cases of pulmonary tuberculosis in man. One calf killed in about four weeks showed 53 nodules of tubercle in the small intestine. The second killed in eight weeks showed 53 nodules, the third killed in about twelve weeks showed 13 nodules. In the fourth calf there were no nodules at all. In calf 3 the nodules in the intestine contained tubercle bacilli. They were absent in the microscopical specimens made of the nodules in calves 1 and 2, but Dr. Martin pointed out that these nodules were tuberculous although no bacilli were found. In experiment II. two calves received at one feeding tuberculous sputum. In one calf killed in eight weeks there were thirteen tuberculous nodules in the small intestine, and tuberculosis of the mesenteric glands. Tubercle bacilli were found in both sets of lesions. The second calf killed in about nineteen weeks showed no disease.

Dr. Ravenel of the Veterinary Department of the University of Pennsylvania had recently carried out experiments of an equally positive character which he made known at the recent Congress on Tuberculosis in London. Four calves were, as in my experiment, inoculated *intra-peritoneally* with tubercular sputum. In one case the result was negative, in the other three a post-mortem examination showed that all had become infected with tuberculosis, the lesions in two being quite extensive. On the other hand calves fed on human tubercular sputum showed no trace of the disease when they were killed for examination.

It is not impossible to explain these contradictory results, they are quite in harmony with the view which I hold that human and bovine tuberculosis are distinct varieties of the same disease. Man is not the natural soil of bovine tuberculosis. The attempts to transmit human tubercle to cattle would not be uniformly successful, and experiments which did not entail the direct insertion of the virus into the tissues might fail entirely. It is quite possible that in my successful experimental case the simultaneous production of blood-posioning diminished the natural resistance of the tissues and rendered the animal markedly susceptible to infection with the virus from a foreign soil. The difference which may exist in the nature of the soil upon which a virus is inoculated must always be remembered. It is well illustrated by the result obtained by the inoculation of human small-pox upon cattle. Cattle do not naturally suffer from small-pox, which is essentially a disease of man, but it can be grafted on bovine tissues in exceptional cases. These experiments are so difficult that many experimenters, who have failed, have refused to believe in the positive results obtained by others. But variolation of the cow is nevertheless possible, and so marked is the effect of the soil, that the high infectious small-pox of man is transformed into a locally-inoculable, mild, vesicular malady in cattle, and can never again acquire an infectious character. Sheep-pox may be given as another instance. In this case a highly infectious malady in sheep when successfully grafted on human tissues is deprived of its infectious character and reduced to the condition of a mild vesicular disorder.

All tubercle bacilli can be inhaled and taken with food by perfectly healthy individuals without producing tuberculosis, but if from any pre-disposing cause there is vulnerability of the tissues it is reasonable to be suspicious of bovine bacilli. As human tubercular virus can be grafted on to the cow so also there are cases in which bovine bacilli invade the human tissues. I refer to those case in which there has been direct inoculation of man. Cooks, grooms, butchers, may suffer from tubercular nodules in the skin containing tubercle bacilli, but they undergo caseation and disappear.

I agree with Dr. Koch in the opinion that human infection can only be quite exceptional. If it were not so, owing to the frequency which tubercle bacilli occur in milk, cream, butter, cheese, and the quantity of meat derived from tuberculous cows, the inhabitants of every country in the world in which bovine tuberculosis was prevalent must

necessarily have been decimated by tubercular disease. I do not accept the theory that abdominal tuberculosis in children is due to infection from tuberculous milk. Those who advocate this view would appear to set aside the opportunities for infection from a human source. If tubercle in children is the result of infection of the digestive tract, there are plenty of opportunities for self-infection when there is concurrent disease of the lungs, and there are obviously many ways by which a child might be infected by the mouth with bacilli from a human source. Physicians who have had enormous experience with tubercular patients of all ages are by no means ready to attribute consumption in any form to tuberculous milk or meat. Sir Douglas Powell in his evidence before the Royal Commission when asked if any danger existed in consuming meat bought in the butcher's shop or in using milk from the milk pail, *i.e.* whether the consumption of milk and meat from tuberculous animals might cause the disease in man, replied that he had not met with any cases in his experience which would connect the two facts together. Dr. Goodhart, Consulting Physician to the Evelina Hospital for Children gave similar evidence. I am convinced that any suspicion of danger can be removed without creating a public scare. It is simply a question of better inspection of dairies and any risk which may exist can be met by adopting the precaution in both private and public dairies of destroying "wasters" or "piners" and removing all cows suffering from any disease of the udder. There is no necessity to insist on the boiling of all milk. Unless there are urgent reasons it is not a practice likely to be generally adopted. Boiled milk is very unpalatable to many people, and the boiling of milk alters its composition and renders it in the opinion of many a danger to infants. Neither Sir Douglas Powell or Dr. Goodhart were prepared to recommend the boiling of milk as a precaution against tuberculosis. Tuberculosis of the bowels is almost unknown in very young children, and it is not even very common in children from five to ten years. In Dr. Goodhart's experience cases occurring in children with a distinct family history of tubercle were very widely spread, and it was quite common to find children becoming tuberculous after measles, bronchial pneumonia, whooping cough and intestinal catarrh.

As regards any danger from tuberculous meat it is in my opinion practically *nil*. I do not believe there has been a single case recorded of tuberculosis contracted by eating tuberculous meat. Jews have a very thorough system of meat inspection and yet they are by no means free from tuberculosis. When travelling in the West Indies I found that tuberculosis was by no means uncommon among negroes, and Dr. Williams of Demerara stated before the Commission that Hindoos and negroes suffered severely. Dr. Williams said that the Hindoos eat very little meat of any kind. The negroes also eat meat in very small quantities, either salt beef or salt pork imported from America, and this is well cooked before it is eaten. They lived for the most part in small and badly ventilated buildings. Negro children suffered from tubercle. They did not have as much milk as they ought and usually, owing to the climate, the milk was boiled.

I think we are justified in concluding that if the carcase is well nourished the meat is perfectly wholesome in spite of the existence of local deposits of tubercle in the organs and glands, which should of course be condemned. The view that an animal in prime condition but with a minute tubercular nodule was a diseased animal and the carcase ought therefore to be destroyed was a very extreme view and could not be carried into practice. As a matter of fact there could be no justification for wholesale destruction of such valuable food. Compulsory destruction of every animal with a tubercular deposit would almost involve the ruin of the agricultural industry, and it would be quite inconsistent with the continued use of meat imported from countries where such drastic measures were not entertained. No government would face the question of compensation for every case of tuberculosis, however slight the lesion. It would be quite as reasonable to demand the destruction of the carcase of every animal suffering from an actinomycotic tumour. Actinomycosis is not only prevalent in cattle but like tuberculosis it is also a disease of the human subject. In this country, in America, and in Australia, it is still commonly known as "cancer." Cancer of the tongue, cancer of the jaw, cancerous polypus, cancerous sores, are different manifestations of actinomycosis. Quite recently a correspondent in *The Times* has suggested that eating the flesh of such animals may account for the prevalence of cancer in man. A most fallacious suggestion, for actinomycosis and cancer have nothing in common except the popular and misleading designation. It was at one time thought, as in the case of tuberculosis, that the disease in man is derived from cattle, and I have succeeded in grafting the human disease in a calf. They are however in my opinion distinct varieties and I do not accept the theory that men and animals infect each other but I believe they contract the disease quite independently and the micro-organism is probably derived from cereals. Does the tubercle bacillus, like the streptothrix actinomyces, exist outside the animal body? There are many other questions bearing on the life history of the tubercle bacillus, its exact rôle in tuberculosis, and its relation to other organisms which are closely allied to it both as regards morphology, staining reaction, and cultivation, such as the bacillus of avian tuberculosis, the tubercle bacilli obtained from fish and worms, the bacillus of Rabinowitsch from gangrene of the lung, of Marpmann from urine, of Meroneson from human fæces, of Karlinski from nasal secretion, Rabinowitsch from milk or butter, and of Mœller from Timothy grass and the dust of other grasses. It is to be hoped that incidentally the New Royal Commission will throw some light on these points.

To eradicate tuberculosis in cattle and so to ensure the breeding of perfectly healthy stock, and thus to restore the confidence of the public in the supply of wholesome meat and milk, will be a splendid work for veterinary surgeons to undertake, and one to which they must direct all their

energies. As regards the prevention of tuberculosis in man that must be left principally to the sanitary inspector and the medical officer of health. We must not concentrate all our energies upon the destruction of tubercle bacilli but rather give more attention to other factors responsible for the causation of tuberculosis. The study of tuberculosis in animals may throw some light on these causes, and experience of the disease in man may assist in elucidating the causes of disease in animals. Tuberculosis is peculiarly liable to occur among birds and animals kept in captivity. Poultry and guinea-fowls are often the subjects, of this disease, and ostriches and other birds in the Zoological Gardens become infected. In monkeys in captivity the disease occasionally occurs in an epidemic form. Pheasants in preserves were attacked sometimes in large numbers, and rabbits in overcrowded warrens. These instances help to illustrate the view that damp and other insanitary conditions, confinement, overcrowding, defective ventilation, heredity, breeding in and in, were the most powerful factors in rendering the tissues prone to tubercle and a fitting soil for the invasion of the bacilli. We must not omit in the case of man the influence of alcoholism which has been so closely investigated by Dr. Brouardel, the influence of previous illnesses such as measles and whooping-cough as urged by Dr. Goodhart, and lastly the influence of special trade occupations which involve inhalation of dust of various kinds.

There are two points which I will discuss at greater length, heredity and tuberculosis in children. Heredity is of two kinds, there is hereditary predisposition to the disease, and hereditary transmission of the virus. There is an inherited susceptibility or weakness which renders many individuals liable to the development of tubercular disease. Family history plays a very important part in human tuberculosis. Sir Douglas Powell states from his experience that 48 per cent. of these cases in hospital suffering from tuberculosis had a previous history of hereditary tuberculosis. Whether all these cases are cases of hereditary predisposition, or hereditary transmission of the virus, or examples of both is not determined. I am entirely in agreement with Dr. Klein and Professor Horsley that in some cases there is direct transmission of the virus and that it may exist for many years in a latent form. Dr. Klein brought this matter very convincingly before the Royal Commission. In connection with this question of heredity some interesting observations upon tuberculosis in birds have been recorded by Dr. Baumgarten. On a poultry farm a cock developed tuberculosis. All the chickens reared from this cock were tuberculous. There was no evidence that the fowls were infected with either human or bovine tubercular virus. An identical case occurred on another farm, and these cases have been accepted as evidence of the direct transmission of the virus from the parent bird. Tuberculosis is a rare disease in calves. It seems probable that those cases which do occasionally occur are mostly if not entirely the result of hereditary transmission. In discussing the occurrence of tuberculosis in children we may derive some consolation from the immunity of calves. Tuberculosis in children is largely a disease of the poor. It attacks all classes, but is extremely common among the London poor and the poor of our overcrowded cities. I would attribute the diseases in children to a want of milk rather than the possible occurrence of a few stray bovine bacilli in milk. Plenty of milk, good nourishing food, and better hygienic surroundings will do more to diminish the numbers of tuberculous children than any legislation directed against bovine bacilli. In proportion as the slums are removed from our over-crowded cities and the problem of the better housing of the poor has been solved we may expect to see a steady diminution in the amount of tuberculosis in children. I believe that the infectious nature of the disease has been exaggerated. It is quite possible that the theory is fallacious. I mean the idea that phthisis can be caught like scarlet fever, or may be compared to typhoid fever is, I think, a mistake. In typhoid fever epidemics at home, in India, and in South Africa, we know that apart from cases of individual insusceptibility we have not to consider any other factors except the introduction of the specific poison of typhoid fever. Those in health and out of health form victims to the disease if they have taken the poison in water or food. There is no question at all of hereditary transmission or of predisposing conditions which render the subject susceptible to the poison. At the same time the habit of spitting in public places and railway carriages and other conveyances should be prohibited, and the sputum of phthisical persons should be disinfected. Several years ago I carried out experiments proving that sputum treated with 20 per cent. carbolic acid was rendered quite inert. Guinea-pigs inoculated with the carbolised sputum remained perfectly healthy, and all control animals were infected without exception. There is no need to create a panic or raise an outcry for legislation to make spitting in public places a matter to be dealt with in the Police Court. That the virus of tubercle scattered far and wide becomes a constant source of danger to all who inhale the air is not a theory which is supported by experiment and experience. Dr. Ransome maintains that in a well ventilated room it is rendered harmless. Tubercular sputum was exposed in the ventilating shaft of a hospital and proved virulent to rodents, but similar sputum exposed for the same time in Dr. Ransome's room, which was ventilated and well lighted, was absolutely harmless.

Dr. Klein placed a number of guinea-pigs in cages in the ventilating shaft of the Brompton Hospital very many years ago. They were kept there for several weeks and all of them became tuberculous. We must not too hastily draw conclusions upon small animals such as rodents. In the same institution it was found among all those who had been connected with it: nurses, porters, physicians, surgeons, and so on, the mortality from consumption was quite within the average of ordinary mortality. I am convinced that if tuberculosis were readily conveyed from person to person,

that marriage of individuals who become or are consumptive would be a fruitful source of direct infection. We should hear constantly of instances in which married people had infected each other with tuberculosis owing to the opportunities which occur for conveying the disease by the breath and in other ways. It is necessary to lay great stress upon the difference between experimental inoculation and natural infection. I cannot therefore regard tuberculosis as catching in the same sense that scarlet fever is catching, nor can I regard the comparison to typhoid fever as one that is not very misleading. Those who aim at eliminating the conditions which I have referred to as powerful factors in the production of tuberculosis will render the greatest services in the crusade against tuberculosis in animals as well as in man. I trust that many of you present to-day will assist in this great work.

The CHAIRMAN: I am sure it is your wish that we should all express our cordial thanks to Professor Crookshank for the exceedingly eloquent and interesting address which you have just heard. (Cheers.) I am sure he has indicated a very large scope of study for all of you who belong to this College, and I am quite sure it is a great source of congratulation to the College that your Principal has been elected on this forthcoming Commission. (Cheers). It is not only a great honour to himself but it is also a great honour to your College here. I fully endorse all which Mr. Crookshank said at the commencement of his address, of the great importance that we should have skilled veterinary surgeons throughout the country. I am quite sure that no one in this theatre who is a student will find that the time which he spends in this College is wasted time or time thrown away. I only wish that I had had more time and had been a student here, because for a great number of years I have been a master of hounds—(cheers)—and have had a large stud of horses which have cost me a great deal of anxiety from time to time. Some years ago I may tell you I was on a yachting cruise in Iceland. There is not a daily post there and I could not frequently get news from home. When I came back in the last week of August I was informed that 15 of my horses were laid up with influenza. I am sure that that was not a very enviable position for a master of hounds to be in. (Hear, hear) What did I do? I immediately applied to the Veterinary College and a Professor was sent down, and I am quite sure it was entirely due to his treatment that the horses got over the disease as well as they did. (Cheers.) I am also indebted to the College not only with regard to the horses but with regard to the hounds also, for a year or two ago we had a disease amongst them. A veterinary here kindly took charge of a couple of the hounds and brought them round allright. The treatment which was adopted I am sure resulted in our having no very bad cases. All the hounds recovered after a time. But this only shows how very important it is that everybody who has an interest in animals, whether he be a farmer or a master of hounds, or a cavalry officer, should have a little veterinary skill. In conclusion I hope that you will all devote your energies to make yourselves masters of the profession and that you will be successful in after life. I have great pleasure in moving a vote of thanks to Professor Crookshank for his very eloquent address. (Cheers.)

Carried by acclamation.

Prof. CROOKSHANK: Mr. Brassey and Gentlemen,—I thank you very much for this cordial vote of thanks. It has been for many years, and I hope it will be for many years to come, my privilege to do what I can for the Royal Veterinary College. (Cheers.) I am afraid I have treated our new students to-day to some of the dry dust of pathology. I would now like to say one word to them in rather a different vein. I have come down from my temporary home in Scotland to deliver my address to you to-day, and I should like to relate to you a little incident which occurred during my stay there. I was fishing in a loch which is very famous for its sea trout and salmon, and having a very favourable day I anticipated great sport. I whipped that loch the whole morning with one or two very unsatisfactory rises and, I must confess, I became somewhat disheartened. I turned to my old gillie and said, "Donald, what is the secret of catching fish on this loch? "Well," he said, "it is just this way, you never know when the fish are going to rise; they may rise half-an-hour in the morning, or they may rise in the middle of the day, and sometimes it may not be until the evening. But there is only one way of catching fish, and that is by sticking to it." Well, I took his advice, and a little later in the afternoon the atmospheric conditions were more favourable, a breeze came up, and I secured a salmon. After that there were two or three large trout and then a three pound sea trout, and afterwards three or four more of about the same size. Now I have a moral to my story. I looked at these beautiful fish at the bottom of the boat and I suppose I had rather the air of self-satisfaction. I also handled my little split cane trout rod with feelings akin to affection. I think my old gillie must have read my feelings, because he said "The real secret you I hope sticking to it." (Hear, hear.) Well, gentlemen, see isthat the new students who have joined to-day will carryout that admirable advice of the old gillie Donald, and that in the College, and in their career in after life, you and they will have success by "sticking to it." (Cheers). Do not get disheartened, as I admit I was at first. Your opportunity in life is certain to come. Then take your opportunity and stick to the work you have in hand. Follow it carefully, keep your eye on your work as you would keep it on your fish, do not get slack—do not keep a slack line, as the gillies say—but bring all your experience and observation to bear on the object which you have in view, and then I am certain you will not only land your fish, but you will succeed in life. (Loud cheers.)

The CHAIRMAN then called upon the Principal of the College, Prof. M'Fadyean, to read the list of prizes gained during the session.

Prof. M'FADYEAN: I have great pleasure in reading out the names of those who have been successful in winning the principal prizes awarded as the result of the competitions which were held during the past session. In the first place there are the Coleman prizes which are awarded as the result of examinations relating to glanders, diseases of the eye, and diseases of the foot. The first prize is a silver medal, which has been won by Mr. F. W. Robards. The second, bronze medal, Mr. E. C. Webb; and certificate of merit, Mr. S. F. G. Pallin.

Centenary Prizes.—Class A., E. Brown; Class B., A. S. Leese; Class C., J. Craig; Class D., F. W. Robards.

Royal Agricultural Society's Medals.—Silver medal, J. Harrison; bronze medal, F. W. Robards.

Clinical Prizes.—Class A.—First prize £5, J. R. Hodgkins; 2nd. prize £3, D Quinlan; 3rd prize £2, F. V. Steward. Class B.—1st. prize £5, F. Hewson; 2nd £3, H. Mason; 3rd. £2, G. G. Brown. Class C.—1st. prize £5, G. Sutton; 2nd. £3, H. E. Gibbs; 3rd. £2, H. B. Hiles.—Class D.—1st. prize £5, E. M. Perry; 2nd. £3, J. Adamson; 3rd. £2, F. Hopkin.

Class Prizes.—Class D.—Veterinary Medicine: 1st. prize, F. W. Robards; 2nd. prize, J. Harrison. Surgery: 1st., F. W. Robards and E. C. Webb; 2nd., G. S. Bruce. Class C.—Pathology: 1st., J. F. Craig; 2nd., G. P. Male. Hygiene: 1st., G. P. Male; 2nd., S. Dodd. Materia medica: 1st., C. W. Townsend; 2nd., H. E. Gibbs. Class

B.—Anatomy: 1st., A. S. Leese; 2nd., H. Mason. Physiology: 1st., A. S. Leese; 2nd., J. C. Broad. Histology: 1st., E. O'Reilly; 2nd., A. N. Foster. Class A.—Chemistry and Toxicology: 1st., E. Brown; 2nd., T. C. Graves. Practical chemistry: 1st., T. C. Graves; 2nd., W. Urquhart. Biology: 1st., T. C. Graves; 2nd., E. Brown. Minor Anatomy: 1st., E. Brown; 2nd., T. C. Graves.

Gentlemen, the Chairman called upon me only to read out the prize list, and I daresay you would have been glad if I had confined myself to that. ("No, no.") However, I am going to do something more. (Cheers.) It is simply to say that Mr. Crookshank, to whom we are so very much indebted, has saved me the trouble of offering you any good advice or pointing out how success is to be attained on the result of the class competitions—which are of comparatively trifling importance—and in your career in after life. I am only going to put the advice which he gave in a very slightly different form. I occasionally have fished for salmon and sea trout—(laughter and cheers)—and I remember very well when I was getting my elementary instruction in that very interesting art I used to ask everybody from whom I thought I could learn anything as to what was the best way to catch salmon and sea trout, and the answer which I usually got was that the best way was to "keep the fly on the water." (Cheers.) I think that is strictly applicable to your course of study here; in other words you must be diligent throughout the whole course, and you must begin immediately. Finally, I want to say that you will all be expected to begin to-morrow, not as if it were the second day of the session, but just the same as if it were the 50th day, or the day before the examination. The lectures will begin at 9 o'clock, and I hope dissection will begin at 10.

Sir George Brown: Gentlemen, I have a very easy and short task which will enable me to finish the interesting work of to-day. We have for Chairman Mr. Albert Brassey, M.P., who has kindly conducted this meeting to your satisfaction I have not the slightest doubt. (Cheers.) It is an encouraging sign in the veterinary profession that there should be so many gentlemen in different walks of life, soldiers, sailors, members of the legal profession, M.P.'s, and Masters of Hounds on your Board, who do not scruple to devote their time not only to occasional attendance here for the purpose of filling the chair, but as hard working members on the Board. (Cheers). I am perfectly certain that you will pass this vote of thanks to Mr. Brassey in your usual emphatic manner.

The vote was carried with acclamation.

The Chairman: Sir George Brown and Gentlemen, I am sure it has given me the greatest possible pleasure to come here to-day and to receive such a hearty welcome. With regard to doing anything as one of the Governors, or in any other capacity on behalf of this College, I am only too glad to render all the service I can. I have said before how important it is to have good veterinary surgeons throughout the country, and I cannot do more than hope that you will all act upon the very excellent advice which you have had from gentlemen on my right and on my left. I hope you will stick to it. I am quite sure that if you do it will stick to you. No doubt there is a very great demand not only in this country but in the colonies, and especially in the Army, for skilled veterinary surgeons. I wish you one and all every success in your future lives.—(Loud cheers.)

Erratum.

In the last issue, article on "Tapeworm in the Dog," by Henry Taylor, p. 187, last line but one, the length of the Tænia serrata is given as ·75 in. It should have been ·75 m. (metre).

EXTRACTS AND NOTES

SWINE FEVER IN NEW ZEALAND.

By Manurewa.

Notwithstanding the greater advantages at the disposal of the home authorities in all their dealings with the diseases of stock, their vast experiences extending over centuries, and the presence of experts of world-wide fame, it is curious to note how much less successful they are in this connection than our own colonial authorities. It cannot be said that diseases of stock have taken deeper root in the old land than they have in these colonies, certainly such cannot be said of sheep-scab, for the flocks of the British Isles were never "scabbed" as our flocks were, yet whilst we have not a single psoroptes ovis left in these colonies, this disgraceful disease—disgraceful because the remedy is so simple—is as marked in England now as it ever was.

With swine fever, which is a very much more difficult disease to deal with, our New Zealand experiences are, however, the same. This serious complaint is always present at home, sometimes worse than at others; still it is always prevalent. During the last few years we have experienced several serious outbreaks of it in this colony, but they have all yielded to successful treatment, and the colony having been almost freed from the trouble, certainly in any serious form, it may be useful to make known all the facts concerning the history of these outbreaks and the treatment which suppressed them.

Previous to January, 1898, two or three isolated outbreaks had occurred in New Zealand, the most important being two cases, one located at Dannevirke, in the North Island, the other at Stirling, in the South. These were summarily dealt with, and all the pigs on the premises being slaughtered, the farms were quarantined for a period. Two or three years afterwards elapsed without any cases of disease, and the colony appeared to have got quite rid of it. Sickness, attended with great mortality, however, broke out in a large herd of pigs located at Mataura, in Southland, and Mr. Reakes, the Government Veterinary Surgeon in charge of the South Island, diagnosed the disease as swine fever, which was afterwards verified by Mr. Gilruth. Very shortly after other outbreaks occurred near Balclutha, in the Wanganui and Taranaki districts. All these cases were successfully dealt with, and no outbreak has occurred in the Balclutha district for many months, while on the west coast of North Island cases are very greatly reduced in numbers and frequency. A second epidemic reappeared on the same premises at Mataura about a year after the first, but was quickly checked. It is worth noting that both these Mataura outbreaks were of an extremely serious character, involving a large number of pigs, but the measures enforced by the officials of the Stock Department proved absolutely effective in preventing the spread of the disease, and no other case of swine fever has since been found within a radius of 30 miles of Mataura. It is true that several outbreaks have lately occurred in the Auckland province, but the department are actively and successfully engaged in stamping out the disease there.

The procedure of the department which has met with such success in dealing with this most difficult disease is, briefly, as follows:—In any suspicious cases of sickness or death amongst pigs, post-mortem specimens were sent to the chief veterinary surgeon in Wellington, the premises where the swine had been kept being quarantined pending a report from him. If on microscopical examination he pronounced the disease to be swine fever, quarantine was enforced for an undefined period. All pigs badly affected were killed, the carcases being either effectively buried or burned; the remainder are kept

under supervision, and as quickly as possible got ready for the butcher, any developing symptoms meanwhile being isolated from the rest, and if very sick, destroyed. When fit for killing, the non-affected pigs were slaughtered and dressed under the supervision of a Government veterinary officer. When possible they were killed on the place, otherwise they were conveyed on wheels (by road or rail) to a suitable slaughterhouse and killed as quickly as possible after arrival, the vehicles in which they travelled, as well as the yards in which they were penned before slaughter, being immediately and thoroughly disinfected. The whole process of removal and slaughter is supervised by the officers of the Department for Agriculture. After the pigs are cleared off, the owner's premises are closed for pigs for a long period and thoroughly disinfected, the sties, fences, etc., being usually burned. The Government pay compensation to the extent of half the market value at the time of condemnation of all pigs condemned and destroyed. A very sick pig, of course, has little or no market value.

The above measures have been thoroughly enforced, and have proved very successful, for there are now fewer outbreaks than at the same period a year since, whilst in the South Island especially, satisfactory results have been secured. All this is highly creditable to Mr. Gilruth, the Chief Veterinary Surgeon; to his Senior Veterinary Officer, Mr. Reakes, who, by the way, is now acting for Mr. Gilruth, during the latter's visit home, and to Mr. Ritchie, the Secretary for Agriculture, these gentlemen having been responsible for the direction of matters that have ended in the suppression virtually of one of the most formidable and obstinate diseases to which our domestic stock is subject.—*The Pastoralists' Review.*

DOCKING HORSES.

Important Case at Kirkby Stephen.

At Kirkby Stephen Police Court on September 9th, before Dr. Fairer (chairman), Messrs. J. R. Watson, T. A. Metcalfe-Gibson, and W. Hallam, George Burton, horse breaker, Brough, and William Dent, farmer, Brough, were charged at the instance of the Royal Society for the Prevention of Cruelty to Animals, with cruelty to a foal between July 31st and August 13th.

Mr. G. A. Lightfoot, Carlisle, appeared for the prosecution.

Thomas Arnison, farm labourer, living with the defendant Dent, said he saw Burton dock the foal on July 31st. It was the same foal which Mr. Malloch examined in August. He saw Burton tie a string round the tail, about half of which had been cut off.

Mr. R. M. Malloch, veterinary surgeon, Kirkby Stephen, said that at Dent's request he examined a filly foal about four months' old, at his farm. It was suffering from lockjaw. He examined the tail, and found it had been cut, leaving a stump about eight inches long, which was gangrenous to the root. The animal was suffering acutely, and he advised that it be immediately slaughtered. Docking was very rarely done now. To tie string to the stump was an unjustifiable practice.

J. J. Bell, V.S., Carlisle, said he considered, except for special reasons, the practice of docking was one that caused pain for an unnecessary purpose. It was not justifiable to tie string round the stump for twenty-four hours, and he attributed the sloughing and gangrene to that cause. The animal must have suffered until death.

Inspector Hustwayte of the Royal Society said he saw Burton and Dent on the 20th ult., when he was told the foal had been struck by lightning. Afterwards Burton said teething had made the animal ill. The docking knife was an old-fashioned weapon and very rusty.

The defendants then gave evidence. Dent said the foal was healthy on the Monday evening, and died on the Tuesday. Mr. Malloch ordered him to put it down, and he did so. The string was only on for about twelve hours.

Burton said he docked the foal in the usual way. He saw the animal almost daily, and thought it was doing uncommonly well. His opinion was that it had been struck by lightning.

The Bench fined each defendant 2s. 6d. and costs. The latter amount to £3 14s. 6d. each, a sum which the Chairman thought unnecessarily heavy. — *The Penrith Observer.*

ACTION FOR NEGLIGENCE.

A case of interest to farmers and horse breeders was heard at Scunthorpe County Court on September 20th before Judge Shortt. The plaintiff was Mr. Wm. Nixon, farmer, Broughton, who was represented by Mr. Appleton, barrister, (instructed by Mr. G. S. Sowter), and the defendant, Mr. J. Brodie Greswell, F.R.C.V.S., of Louth, who was defended by Mr. T. H. Walker, barrister (instructed by Mr. W. Hadden Owen, Louth). The plaintiff sought to recover damages to two colts which had been operated upon by a Mr. Harris, Mr. Greswell's assistant, and at the time of the operation the plaintiff was under the impression that it was Mr. Greswell. The amount claimed was £39 7s., and negligence and want of skill were alleged. The evidence showed that in May, 1900, defendant had four colts which he wanted cutting, and having heard of Mr. Greswell's fame as a lecturer, etc., wanted to engage him. Defendant made an appointment for May 14, and on that day plaintiff met at Brigg Station, Mr. Greswell as he thought, but it afterwards appeared that it was Mr. Harris, the assistant, who, it was alleged, was not a qualified person. Plain addressed Mr. Harris several times during the operation. and afterwards as Greswell, and was never contradicted, The colts were cut, and at the time it was noticed that the colts were very restive and that the operator did not appear very skilful. Next morning one of the colts was found dead, two were nearly so, and the other was bleeding. Defendant wired to Mr. Greswell, and got a reply that he was coming by next train, but he never turned up, and a veterinary surgeon from Winterton was engaged. The delay in bringing the action was on account of plaintiff waiting to see if a roan colt would get better, as it was suffering from paraphimosis, but it got no better, and the action was then brought.

The defence was that Mr. Greswell did not personally promise to do the work, Harris, his assistant, had been with him five years, and was very skilful; and paraphimosis could be cured if properly treated, and that the death of the colt was merely an accident that might at any time occur.—The jury gave a verdict for the plaintiff with damages £26 6s.—*Sheffield Daily Telegraph.*

ACTION FOR BREACH OF AGREEMENT.

At Colchester County Court on September 17th, before His Honour Judge Tindal Atkinson, Rowland Taylor, of Finginghoe, lately carrying on business in Colchester as a veterinary surgeon, brought an action against Herbert Cleveland, described as a veterinary surgeon, of Nayland, to recover damages for breach of an agreement, and claimed an injunction to prevent defendant practising as a veterinary surgeon, contrary to the agreement. Mr. Asher Prior appeared for the plaintiff, and Mr. H. W. Jones for the defendant.

The case for the plaintiff was that while carrying on business in Colchester in 1892, defendant entered his employ, and an agreement was drawn up, one clause stating that defendant should not, during the continu-

ance of that agreement, practise or carry on the profession of a veterinary surgeon, either for himself or any other person within a radius of ten miles of the borough of Colchester, and that in the event of his so practising he should pay £200 to the plaintiff. After three years' service defendant left, and, said Mr. Prior, in the coolest way possible had been carrying on business within the prohibited radius at Nayland, and at Boxford had been convicted for practising contrary to the Veterinary Surgeons' Act of 1881. In 1899 the plaintiff assigned the business to his son, and inasmuch as defendant, while in plaintiff's employ, had obtained introductions to many customers, and had been doing work for them, defendant's conduct was calculated to reduce the profits of the firm. For some time past defendant had been acting as *locum tenens* for Mr. Edward Prime, a veterinary surgeon at Colchester, and had attended horses for the Co-operative Society, Thos. Moy, Ltd., the Colchester Brewing Company, and Mr. A. G. Mumford, and cattle for other people.

Mr. Edward Prime, veterinary surgeon, of Colchester, deposed that defendant had assisted him in his business during the seven or eight weeks he was ill. He boarded in the house, but witness had not paid him any money. Witness's son had, however, paid him some, the exact amount of which he did not know.

Other evidence being given as to defendant's attendance to horses belonging to persons in Colchester, Mr. Jones contended that the son ought to be the plaintiff, as Mr. Taylor, sen., had assigned to him his interest in the business. Further, the agreement was barred by the Statute of Limitations, and thirdly it was void, because there was no consideration given, and it was in restraint of trade. Finally, on the facts as stated, defendant had not committed any breach of the agreement. The plaintiff himself broke the agreement by illegally discharging defendant in 1895. He (Mr. Jones) had brought an action against the present plaintiff for damages, and the verdict was given in favour of Cleveland.

Mr. Prior said there was a verdict by consent for the amount paid in.

His Honour remarked that he was not satisfied that the present plaintiff had broken the agreement; and said the value of the assignment depended upon whether it was a personal agreement, or one connected with the business. Under the circumstances, he reserved judgment.—*Colchester Mercury.*

Lectures on Saddlery.

The Worshipful Company of Saddlers have arranged a free course of eight evening lectures to be given to members of the Trade in the Company's Hall, 141 Cheapside, on successive Wednesday evenings, at 8 p.m., commencing October 30th, 1901.

The lectures will be delivered by Vet.-Lieut.-Colonel J. A. Nunn, C.I.E., D.S.O., F.R.C.V.S., Army Veterinary Department, on "The Adaptability of Saddlery and Harness, with a view to preventing many of the injuries to which horses are liable."

Syllabus.—Objects of the Lectures.—Anatomy of the parts of the horse's body liable to injury from Saddles, Harness, etc. (*a*) Bones. (*b*) Ligaments and Tendons. (*c*) Muscles. (*d*) Nerves and Blood Vessels. (*e*) Skin and Hair.—Physiology of the parts of the horse's body liable to injury from Saddles, Harness, etc. (*a*) Growth (*b*) Nutrition. (*c*) Motion. (*d*) Decay.—Different form of horse's backs and shoulders.—Different classes of horses.—Injuries. (*a*) Caused by Pressure. (*b*) By Friction. (*c*) Results.—Saddles. (*a*) Parts that are at Fault. (*b*) Faults on part of Rider. (*c*) Remedies.—Harness and Collars. (*a*) Parts that are at Fault. (*b*) Faults in Harnessing. (*c*) Remedies.—Special Injuries (*a*) Saddles. (*b*) Harness. (*c*) Remedies.—Bridles and Bits. Injuries and Remedies.

At the conclusion of the Course an Examination will be held and Certificates awarded to such Candidates as possess a competent knowledge of the Subject.

Candidates desirous of attending should apply to The Clerk, Saddlers' Hall, Cheapside, furnishing their name, address, and particulars of occupation, upon receipt of which a card of admission to the Course will be duly forwarded.

Personal.

BATTALION ORDERS.

14th Middlesex (Inns of Court) Volunteer Rifle Corps.

General Sir Evelyn Wood, V.C., G.C.B., C.C.M.G., Hon. Colonel; Lieut.-Col. and Hon. Col. S. H. S. Lofthouse, V.C., Col. Commanding.

HONORARY MEMBER.

VII.—The Commanding Officer has been pleased to invite the undermentioned gentlemen to become Honorary Members of the Corps under Section 3, Rule 5, of the Rules of the Corps, in recognition of services rendered to the Regiment:—Veterinary-Lieut.-Colonel J. A. Nunn, Army Veterinary Department.

By Order (Signed) B. KERR PEARSE.
Captain and Adjutant, 14th Middlesex (Inns of Court) Volunteer Rifle Corps

Lincoln's Inn, Oct. 5th, 1901.

At the annual meeting of the American Veterinary Medical Association, held at Atlantic City, New Jersey, U.S.A., September 3rd, 4th, 5th and 6th, Mr. W. H. Dalrymple, M.R.C.V.S., Baton Rouge, La., U.S.A., was, for the second year in succession, elected one of its vice-presidents. Also, at the annual meeting of the United States Experiment Station Veterinary Medical Association, held at the same place, on September 4th, Mr. Dalrymple was elected president of that Association.

WALL—BROWN.—At Christ Church Cathedral, St. Louis, on the 21st. September, by the Rev. Mr. Sinclair, Reginald Francis Wall, M.R.C.V.S., to Annie Noble, only daughter of the late S. Brown, Leith, and stepdaughter of P. Sandager, 31, North Fort Street, Leith. (By cable).

CORRESPONDENCE.

THE REGISTRATION COMMITTEE.

Sir,

Will you kindly allow me through your columns to say that I shall appear before the Registration Committee on Wednesday next, at 2.30 p.m., to answer the complaint lodged against me "for issuing circulars contrary to bye-law 113" and that I hope Messrs. J. Simpson, S. Bennett, W. Graves and J. W. Thomas will be present. I wish them to know the time of the investigation to give them the opportunity of being there if they will.—Yours truly,

GEO. A. BANHAM.

15 Downing Street, Cambridge.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED.—Messrs. W. W. Little, J. Russel, F. Hobday, W. H. Dalrymple, H. Taylor, G. Mayall, W. Awde. Vet.-Major J. W. A. Morgan. A.V.D. (Retired.) *Annual Administration Report C.V.D. India. Annual Report Imp. Bacteriologist for 1900-1901* (Calcutta.) *The Referee, The Irish Times, The Scotsman, The Morpeth Herald.*